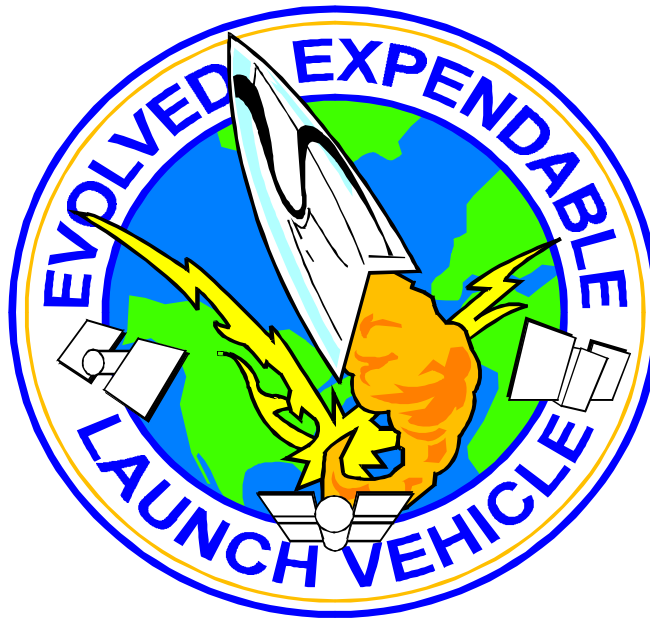


Evolved Expendable Launch Vehicle (EELV)

Briefing to 1998 National Space Symposium
Catching a Ride to Orbit Session



Affordability Through Innovation

Col Richard McKinney
System Program Director



Overview

- ➡ **Program Background**
- **Acquisition Strategy Change**
- **Summary**

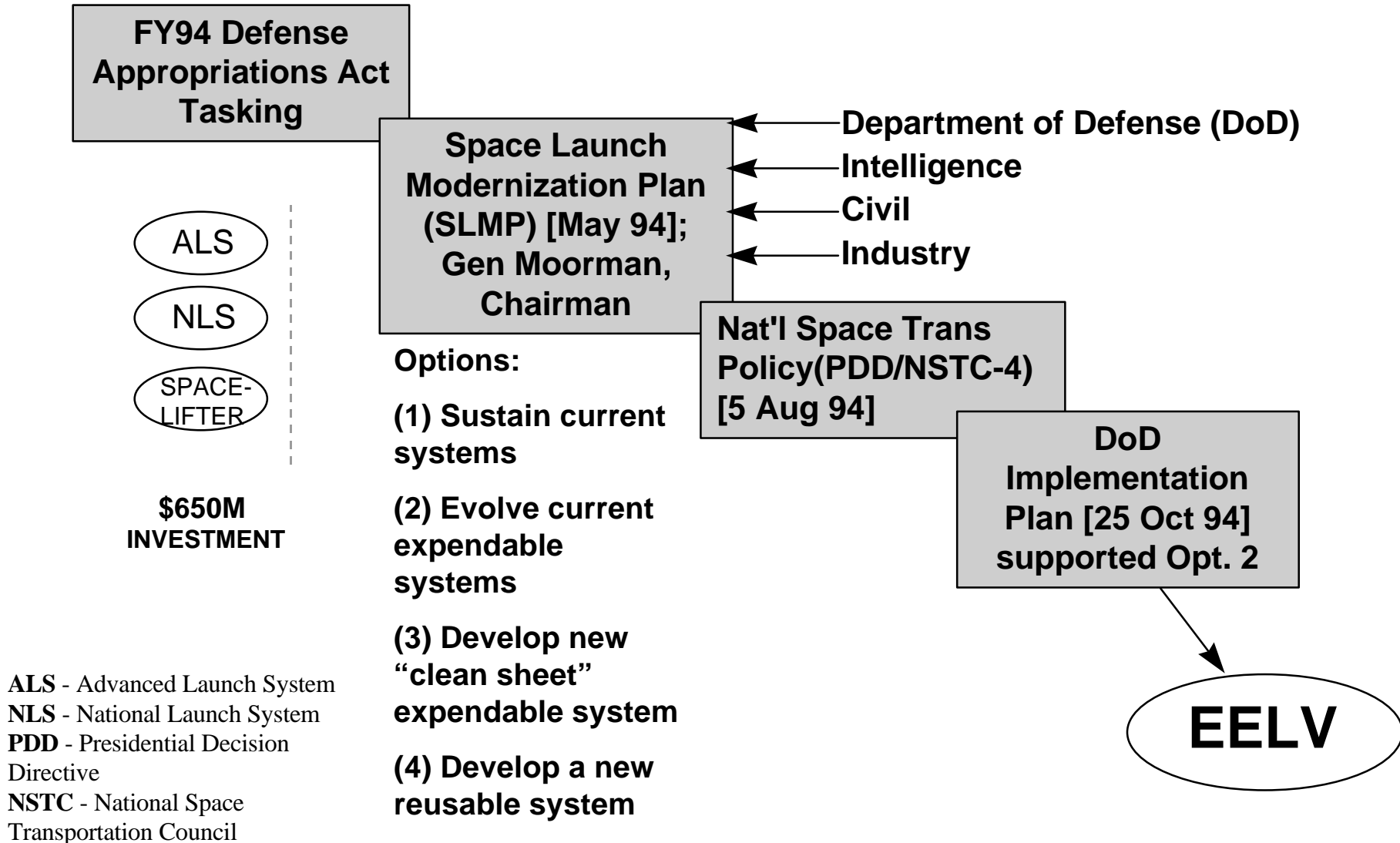


EELV Mission Statement

- **Mission:**
 - Partner with Industry to develop a national launch capability that satisfies the Government's national mission model requirements and reduces the cost of space launch by at least 25%
- **Objectives:**
 - Increase the U.S. space launch industry's competitiveness in the international space launch market
 - Implement acquisition reform initiatives resulting in reduced government resources necessary to manage system development and acquire launch services



Background






EELV Contractors' System Concepts



 **BOEING**



LOCKHEED MARTIN 



Drivers to EELV Program

- **Key Performance Parameters:**
 - Launch National Mission Model
 - Design Reliability
 - Standardized Launch Pads
 - Standard Vehicle Interface
- **Cost**
 - Probably first time a space program has cost as THE driver
 - Direct Impact to Warfighter



Overview

- **Program Background**
- ➡ **Acquisition Strategy Change**
- **Summary**



Acquisition Strategy

- **Original acquisition strategy formulated in early 1995**
 - **Strategy called for downselecting to one contractor**
 - Contractor provides a family of launch vehicles to support Government requirements
 - Contractor in a position to capture a larger share of the international commercial launch market
- **Other features of original strategy:**
 - **Cost-type contract for Engineering & Manufacturing Development (EMD) contract**
 - **Two system test flights during EMD**
- **Approach in strategy revised on 6 Nov 97**



Why Change Strategy?

**Larger commercial market
than envisioned two years
ago**



**Sufficient market to
support two contractors**

Industry Involvement

Gov't leverage commercial market competition



Why Change Strategy?

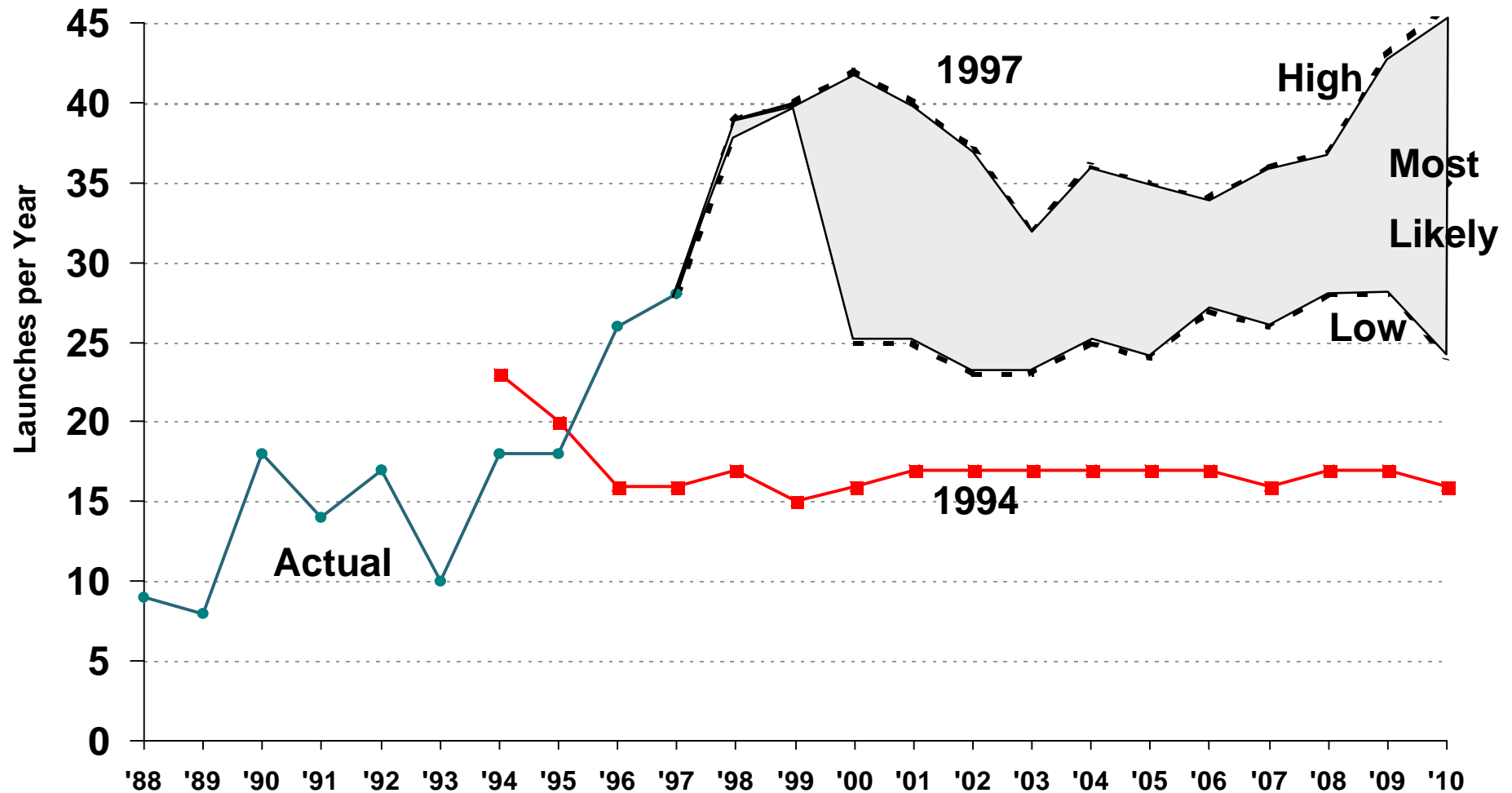
Changes Since the “Moorman Study”

1994, SPACE LAUNCH MOD. PLAN	TODAY
Future med/heavy launch market dominated by government	Launch market dominated by commercial market
Little potential in commercial market for growth or economy	Tremendous growth potential in commercial market
Conclusion: too many launch providers/production capacity	Conclusion: sufficient market to support two EELV concepts
Recommendation: reduce industrial overhead; downsize; reduce niche markets; DoD pursue innovative incentives	Recommendation: Partner with industry to develop EELV family; leverage competition in commercial markets
Led to single EELV contractor developing a modular family of vehicles	Leads to two competing EELV contractors over life of program for commercial launch services



COMSTAC Addressable

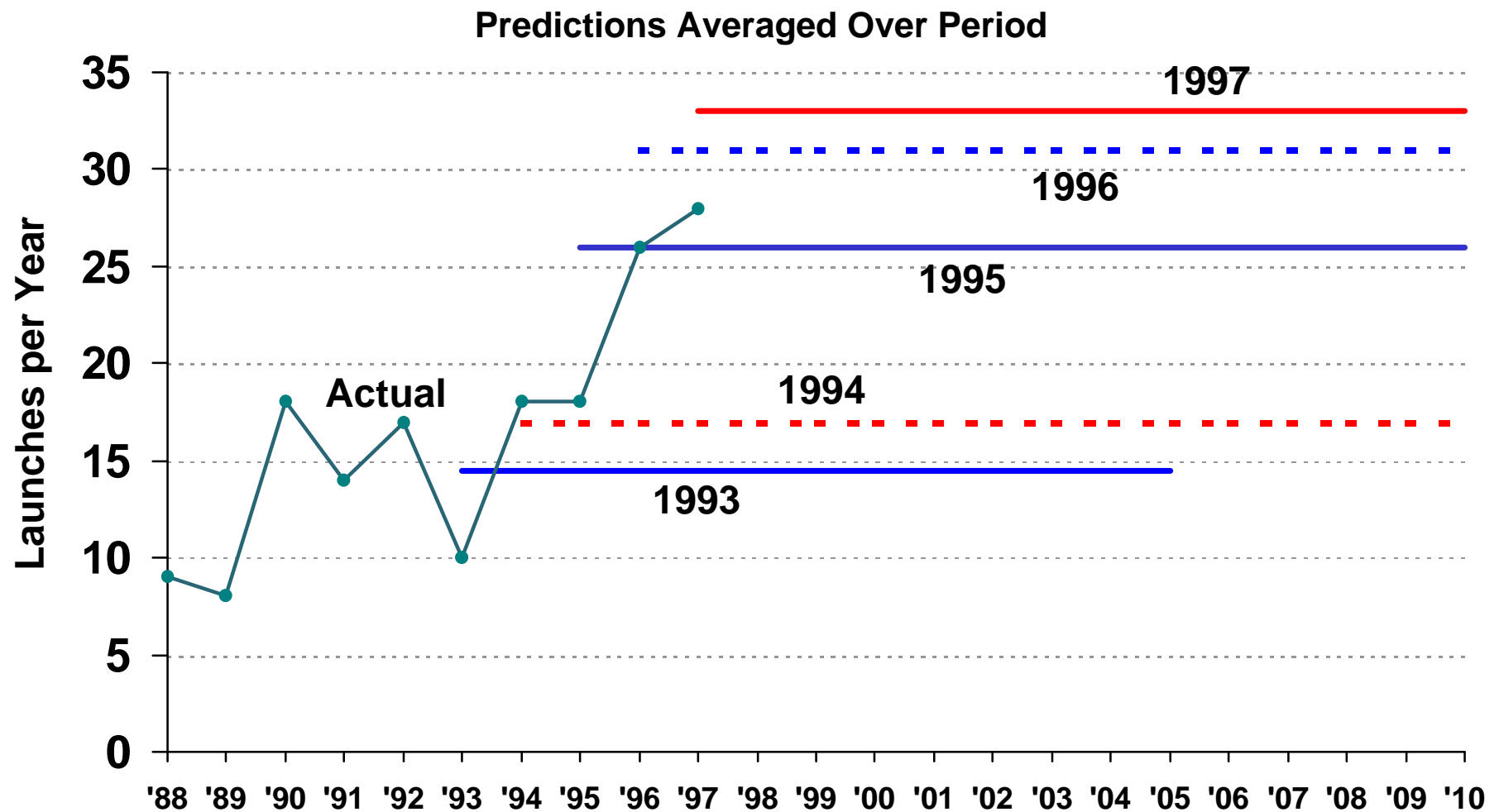
Commercial Geosynchronous Transfer Orbit (GTO) Market





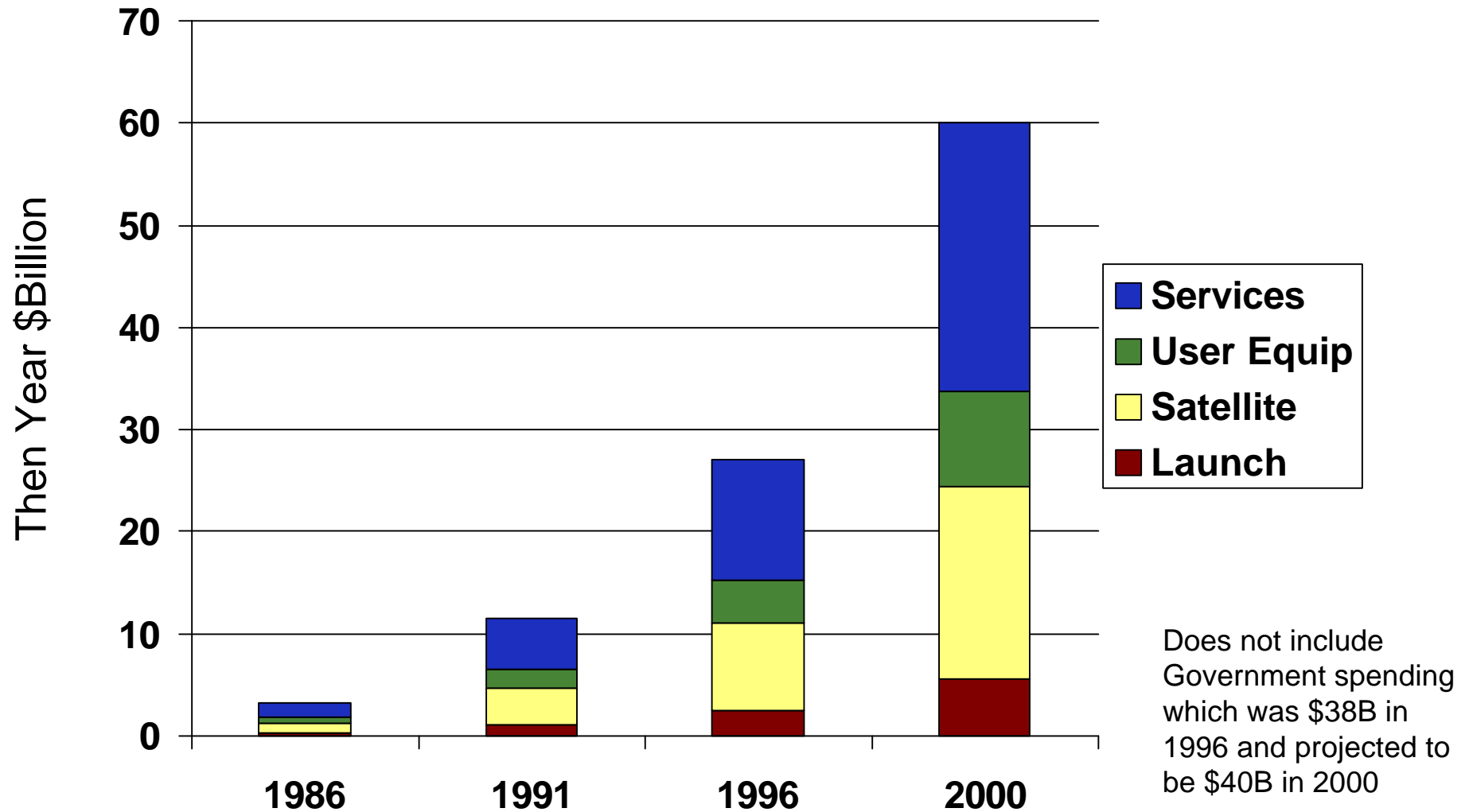
Why Change Strategy?

COMSTAC Addressable Commercial GTO Market





Commercial Space Market Growth





Summary of Strategy Change

Old

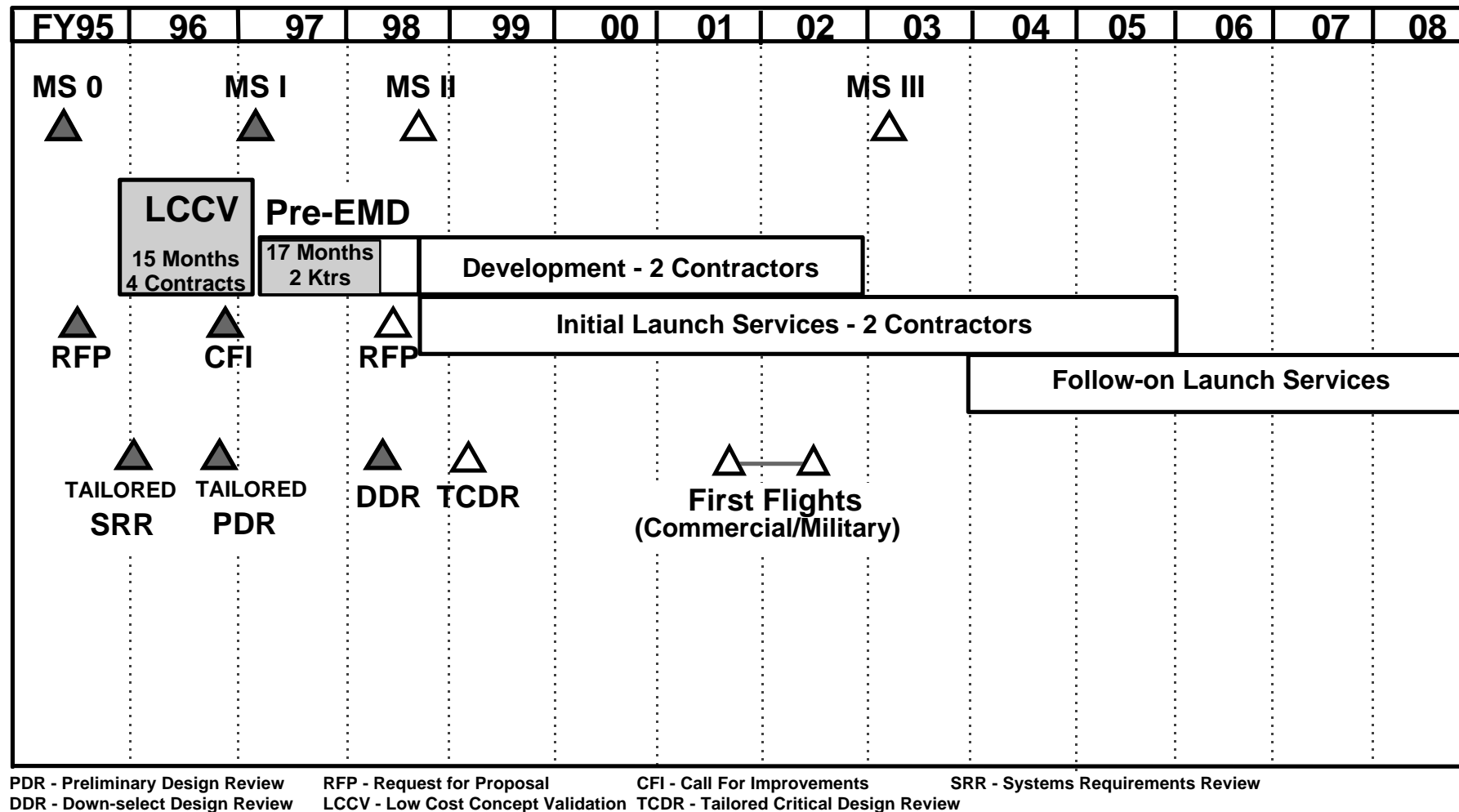
- Cost-type contract for EMD
- Two system test flights
- Downselect to one
- Production

New

- Fixed Gov't investment for development in addition to contractor investment
- No system test flights
- Compete two over life of program
- Launch services



EELV Acquisition Schedule





Overview

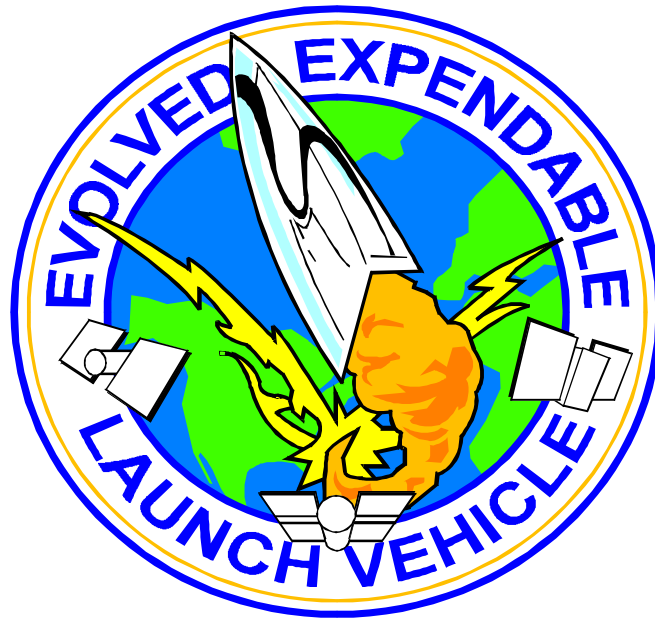
- **Program Background**
- **Acquisition Strategy Change**
- ➞ **Summary**



Summary

What Does This Mean to You?

- Ensures two viable U.S. providers of launch services, each with a Government business base
- U.S. becomes more competitive in international market and captures a greater market share
- EELV will reduce the cost of space launch



Affordability Through Innovation